

In the Claims

1. (currently amended) A process for increasing the molecular weight and/or for the modification of a polycondensate, which process comprises adding to the polycondensate

a) at least one bis-acyllactam~~[[.]]~~ and

b1) at least one phosphite, phosphinate or phosphonate; or

b2) at least one benzofuran-2-one type compound or

b3) at least one phosphite, phosphinate or phosphonate and one benzofuran-2-one type compound and

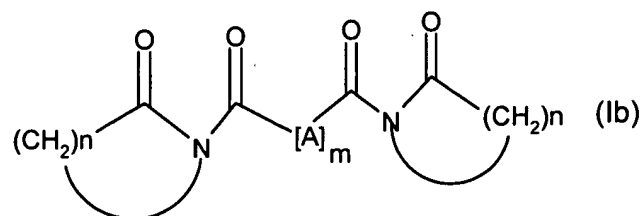
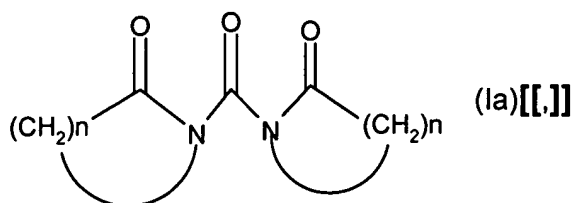
processing the mixture in the melt.

2. (currently amended) A process according to claim 1 wherein the polycondensate is an aliphatic or aromatic polyester, an aliphatic or aromatic polyamide or polycarbonate~~[[.]]~~ or a blend or copolymer thereof.

3. (currently amended) A process according to claim 1 wherein the polycondensate is polyethylene terephthalate (PET), polybutylene terephthalate (PBT), polyethyleneterephthalate (PEN), a copolyester, PA 6, PA 6,6~~[[.]]~~ or a polycarbonate containing bisphenol A, bisphenol Z or bisphenol F linked via carbonate groups.

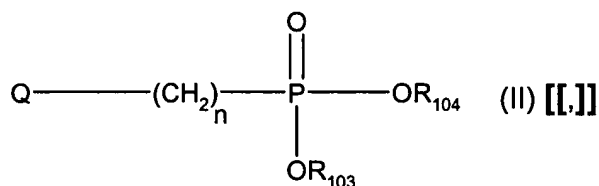
4. (original) A process according to claim 1 wherein the polycondensate is PET or PBT or a copolymer of PET or PBT.

5. (currently amended) A process according to claim 1 wherein the bis-acyllactam is of formula Ia or Ib



wherein A is C₁-C₁₈alkylene, C₂-C₁₈alkylene interrupted by at least one oxygen atom, C₁-C₁₈alkenylene, phenylene, phenylene-C₁-C₁₈alkylene, C₁-C₁₈alkylene-phenylene $[(.)]$ or C₁-C₁₈alkylene-phenylene-C₁-C₁₈alkylene;
m is 0 or 1 and
n is a number from 3 to 12.

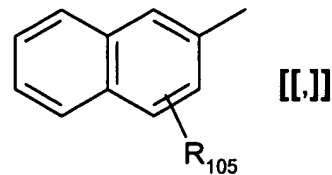
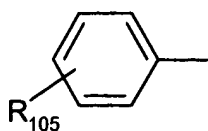
6. (currently amended) A process according to claim 1 wherein the phosphonate is of formula II



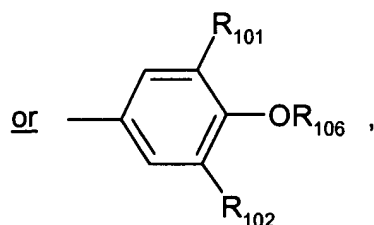
wherein

R₁₀₃ is H, C₁-C₂₀alkyl $[(.)]$ or unsubstituted or C₁-C₄alkyl-substituted phenyl or naphthyl,
R₁₀₄ is hydrogen, C₁-C₂₀alkyl $[(.)]$ or unsubstituted or C₁-C₄alkyl-substituted phenyl or naphthyl;
or is M^{r+} / r,
M^{r+} is an r-valent metal cation or the ammonium ion,
n is 0, 1, 2, 3, 4, 5 or 6 $[(.)]$ and
r is 1, 2, 3 or 4;

Q is hydrogen, $-X-C(O)-OR_{107}$ [1.1] or a radical

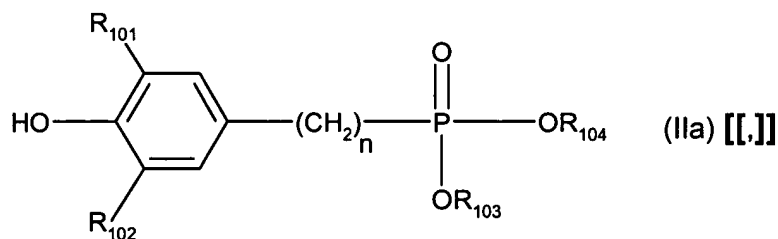


[1.1]



R_{101} is isopropyl, tert-butyl, cyclohexyl, or cyclohexyl which is substituted by 1-3 C_1-C_4 alkyl groups,
 R_{102} is hydrogen, C_1-C_4 alkyl, cyclohexyl, or cyclohexyl which is substituted by 1-3 C_1-C_4 alkyl groups,
 R_{105} is H, C_1-C_{18} alkyl, OH, halogen or C_3-C_7 cycloalkyl;
 R_{106} is H, methyl, trimethylsilyl, benzyl, phenyl, sulfonyl or C_1-C_{18} alkyl;
 R_{107} is H, C_1-C_{10} alkyl or C_3-C_7 cycloalkyl [1.1] and
X is phenylene, C_1-C_4 alkyl group-substituted phenylene or cyclohexylene.

7. (currently amended) A process according to claim 6 wherein the phosphonate is of formula IIa



(IIa) [1.1]

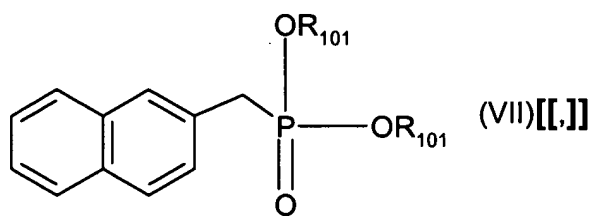
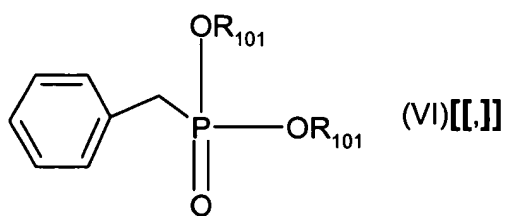
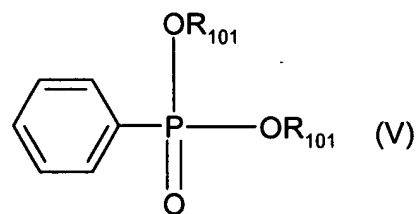
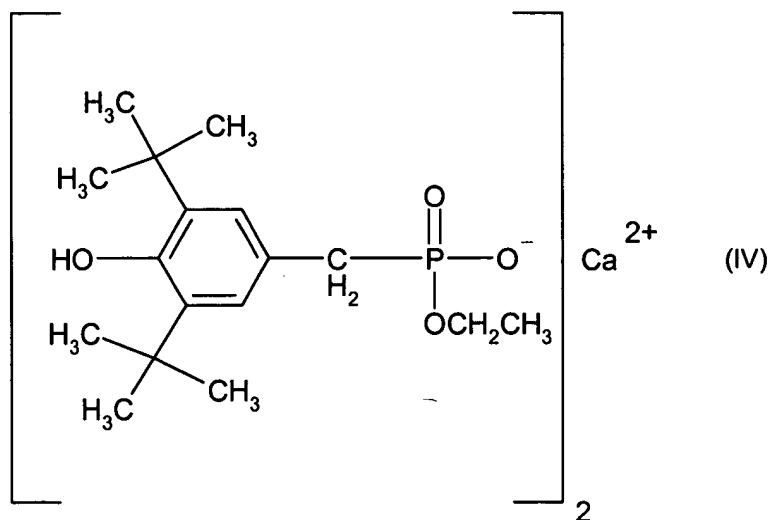
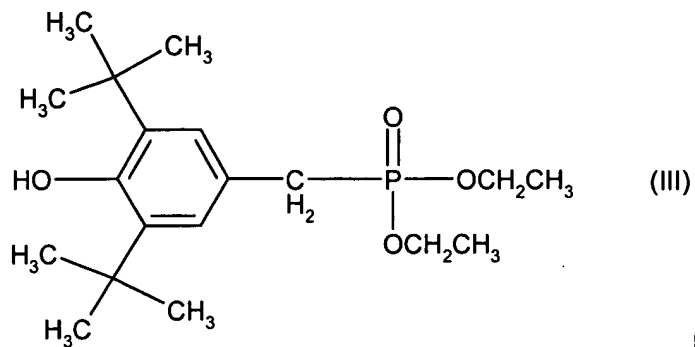
wherein

R_{101} is H, isopropyl, tert-butyl, cyclohexyl, or cyclohexyl which is substituted by 1-3 C_1-C_4 alkyl groups,
 R_{102} is hydrogen, C_1-C_4 alkyl, cyclohexyl, or cyclohexyl which is substituted by 1-3 C_1-C_4 alkyl groups,
 R_{103} is C_1-C_{20} alkyl [1.1] or unsubstituted or C_1-C_4 alkyl-substituted phenyl or naphthyl,
 R_{104} is hydrogen, C_1-C_{20} alkyl [1.1] or unsubstituted or C_1-C_4 alkyl-substituted phenyl or naphthyl;
or is M^{r+} / r;
 M^{r+} is an r-valent metal cation,

r is 1, 2, 3 or 4 [[:]] and

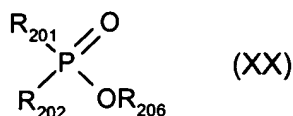
n is 1, 2, 3, 4, 5 or 6.

8. (currently amended) A process according to claim [[:]]6 wherein the phosphonate is of formula III, IV, V, VI or VII



wherein the R₁₀₁ are each independently of one another hydrogen or M^{r+} / r. [[:]]

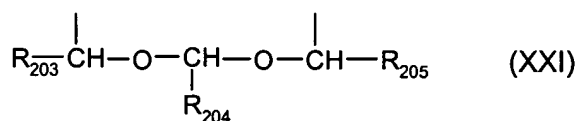
9. (currently amended) A process according to claim 1 wherein the phosphinates are of the formula XX



wherein

R_{201} is hydrogen, $\text{C}_1\text{-C}_{20}$ alkyl, phenyl or $\text{C}_1\text{-C}_4$ alkyl substituted phenyl; biphenyl, naphthyl, $-\text{CH}_2\text{-O-C}_1\text{-C}_{20}$ alkyl or $-\text{CH}_2\text{-S-C}_1\text{-C}_{20}$ alkyl,

R_{202} is $\text{C}_1\text{-C}_{20}$ alkyl, phenyl or $\text{C}_1\text{-C}_4$ alkyl substituted phenyl; biphenyl, naphthyl, $-\text{CH}_2\text{-O-C}_1\text{-C}_{20}$ alkyl or $-\text{CH}_2\text{-S-C}_1\text{-C}_{20}$ alkyl, or R_{201} and R_{202} ~~R_1 and R_2~~ together are a radical of the formula XXI



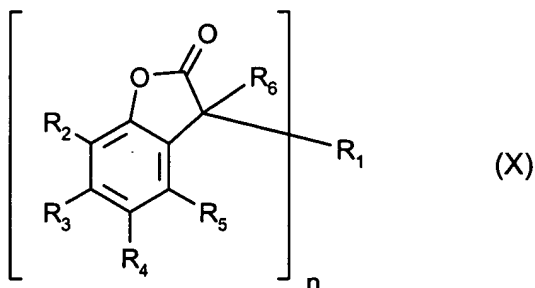
wherein

R_{203} , R_{204} and R_{205} independently of each other are $\text{C}_1\text{-C}_{20}$ alkyl, phenyl or $\text{C}_1\text{-C}_4$ alkyl substituted phenyl; and

R_{206} is hydrogen, $\text{C}_1\text{-C}_{18}$ alkyl or the ion of an alkali metal or the ammonium ion or

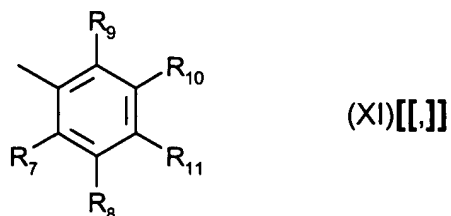
R_{206} is a direct bond, which forms together with R_{202} an aliphatic or aromatic cyclic ester.

10. (currently amended) A process according to claim 1 wherein the benzofuran-2-one type compound is of formula X



wherein, if $n = 1$,

R_1 is naphthyl, phenanthryl, anthryl, 5,6,7,8-tetrahydro-2-naphthyl, 5,6,7,8-tetrahydro-1-naphthyl, thienyl, benzo[b]thienyl, naphtho[2,3-b]thienyl, thianthrenyl, dibenzofuryl, chromenyl, xanthenyl, phenoxathiinyl, pyrrolyl, imidazolyl, pyrazolyl, pyrazinyl, pyrimidinyl, pyridazinyl, indoliziny, isoindolyl, indolyl, indazolyl, purinyl, quinoliziny, isoquinolyl, quinolyl, phthalazinyl, naphthyridinyl, quinoxalinyl, quinazolinyl, cinnolinyl, pteridinyl, carbazolyl, β -carbolinyl, phenanthridinyl, acridinyl, perimidinyl, phenanthrolinyl, phenazinyl, isothiazolyl, phenothiazinyl, isoxazolyl, furazanyl, biphenyl, terphenyl, fluorenyl or phenoxazinyl, each of which is unsubstituted or substituted by C_1 - C_4 alkyl, C_1 - C_4 alkoxy, C_1 - C_4 alkylthio, hydroxy, halogen, amino, C_1 - C_4 alkylamino, phenylamino or di(C_1 - C_4 -alkyl)amino, or R_1 is a radical of formula XI



and [.]

if $n = 2$,

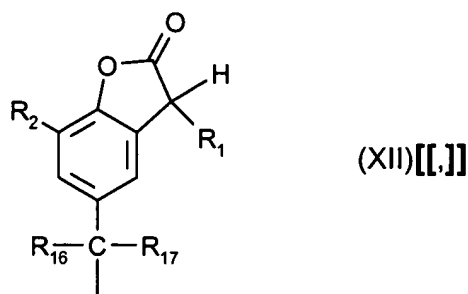
R_1 is unsubstituted or C_1 - C_4 alkyl- or hydroxy-substituted phenylene or naphthylene; or $-R_{12}-X-R_{13}-$,

R_2 , R_3 , R_4 and R_5 are each independently of one another hydrogen, chloro, hydroxy, C_1 - C_{25} -alkyl, C_7 - C_9 phenylalkyl, unsubstituted or C_1 - C_4 alkyl-substituted phenyl; unsubstituted or C_1 - C_4 alkyl-substituted C_5 - C_8 cycloalkyl; C_1 - C_{18} alkoxy, C_1 - C_{18} alkylthio, C_1 - C_4 alkylamino, di(C_1 - C_4 -alkyl)amino, C_1 -

C₂₅alkanoyloxy, C₁-C₂₅alkanoylamino, C₃-C₂₅alkenoyloxy; C₃-C₂₅alkanoyloxy which is interrupted by

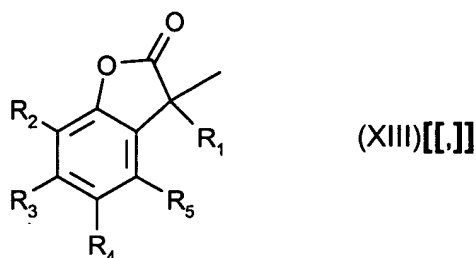
oxygen, sulfur or >N-R_{14} ; C₆-C₉cycloalkylcarbonyloxy, benzoyloxy or C₁-C₁₂alkyl-substituted

benzoyloxy; or R₂ and R₃, or R₃ and R₄, or R₄ and R₅, together with the linking carbon atoms, form a benzene ring, R₄ is additionally -(CH₂)_p-COR₁₅ or -(CH₂)_qOH or, if R₃, R₅ and R₆ are hydrogen, R₄ is additionally a radical of formula XII



wherein R₁ is as defined above for n = 1,

R₆ is hydrogen or a radical of formula XIII



wherein R₄ is not a radical of formula XII[[.]] and R₁ is as defined above for n = 1,

R₇, R₈, R₉, R₁₀ and R₁₁ are each independently of one another hydrogen, halogen, hydroxy,

C₁-C₂₅alkyl; C₂-C₂₅alkyl which is interrupted by oxygen, sulfur or >N-R_{14} ; C₁-C₂₅alkoxy;

C₂-C₂₅alkoxy which is interrupted by oxygen, sulfur or >N-R_{14} ; C₁-C₂₅alkylthio, C₃-C₂₅-alkenyl,

C₃-C₂₅alkenyloxy, C₃-C₂₅alkynyl, C₃-C₂₅alkynyloxy, C₇-C₉phenylalkyl, C₇-C₉phenylalkoxy, unsubstituted or C₁-C₄alkyl-substituted phenyl; unsubstituted or C₁-C₄alkyl-substituted phenoxy; unsubstituted or C₁-C₄alkyl-substituted C₅-C₈cycloalkyl; unsubstituted or C₁-C₄alkyl-substituted C₅-C₈cycloalkoxy; C₁-C₄alkylamino, di(C₁-C₄alkyl)amino, C₁-C₂₅alkanoyl; C₃-C₂₅alkanoyl which is interrupted by oxygen,

sulfur or >N-R_{14} ; C₁-C₂₅alkanoyloxy; C₃-C₂₅alkanoyloxy which is interrupted by oxygen, sulfur or

>N-R_{14} ; C₁-C₂₅alkanoylamino, C₃-C₂₅alkenoyl; C₃-C₂₅alkenoyl which is interrupted by oxygen,

sulfur or >N-R_{14} ; C₃-C₂₅alkenoyloxy; C₃-C₂₅alkenoyloxy which is interrupted by oxygen, sulfur or

>N-R_{14} ; C₆-C₉cycloalkylcarbonyl, C₆-C₉cycloalkylcarbonyloxy, benzoyl or C₁-C₁₂alkyl-substituted

benzoyl; benzoyloxy or C₁-C₁₂alkyl-substituted benzoyloxy; $\text{—O—}\overset{\overset{\text{R}_{18}}{|}}{\underset{\underset{\text{R}_{19}}{|}}{\text{C}}}\text{—}\overset{\overset{\text{O}}{||}}{\text{C}}\text{—R}_{15}$ or

$\text{—O—}\overset{\overset{\text{R}_{20}}{|}}{\underset{\underset{\text{H}}{|}}{\text{C}}}\text{—}\overset{\overset{\text{R}_{21}}{|}}{\underset{\underset{\text{R}_{22}}{|}}{\text{C}}}\text{—O—R}_{23}$ or, in formula II, R₇ and R₈, or R₈ and R₁₁, together with the linking carbon

atoms, form a benzene ring,

R₁₂ and R₁₃ are each independently of the other unsubstituted or C₁-C₄alkyl-substituted phenylene or naphthylene,

R₁₄ is hydrogen or C₁-C₈alkyl,

R₁₅ is hydroxy, $\left[\text{—O}^- \frac{1}{r} \text{M}^{r+} \right]$, C₁-C₁₈alkoxy or $\text{—N}\begin{matrix} \text{R}_{24} \\ \text{R}_{25} \end{matrix}$,

R₁₆ and R₁₇ are each independently of the other hydrogen, CF₃, C₁-C₁₂alkyl or phenyl, or R₁₆ and R₁₇, together with the linking carbon atom, are a C₅-C₈cycloalkylidene ring which is unsubstituted or substituted by 1 to 3 C₁-C₄alkyl;

R₁₈ and R₁₉ are each independently of the other hydrogen, C₁-C₄alkyl or phenyl,

R₂₀ is hydrogen or C₁-C₄alkyl,

R₂₁ is hydrogen, unsubstituted or C₁-C₄alkyl-substituted phenyl; C₁-C₂₅alkyl; C₂-C₂₅alkyl which is

interrupted by oxygen, sulfur or >N-R_{14} ; C₇-C₉phenylalkyl which is unsubstituted or substituted at the phenyl moiety by 1 to 3 C₁-C₄alkyl; C₇-C₂₅phenylalkyl which is interrupted by oxygen, sulfur or

>N-R_{14} and which is unsubstituted or substituted at the phenyl moiety by 1 to 3 C₁-C₄alkyl, or R₂₀

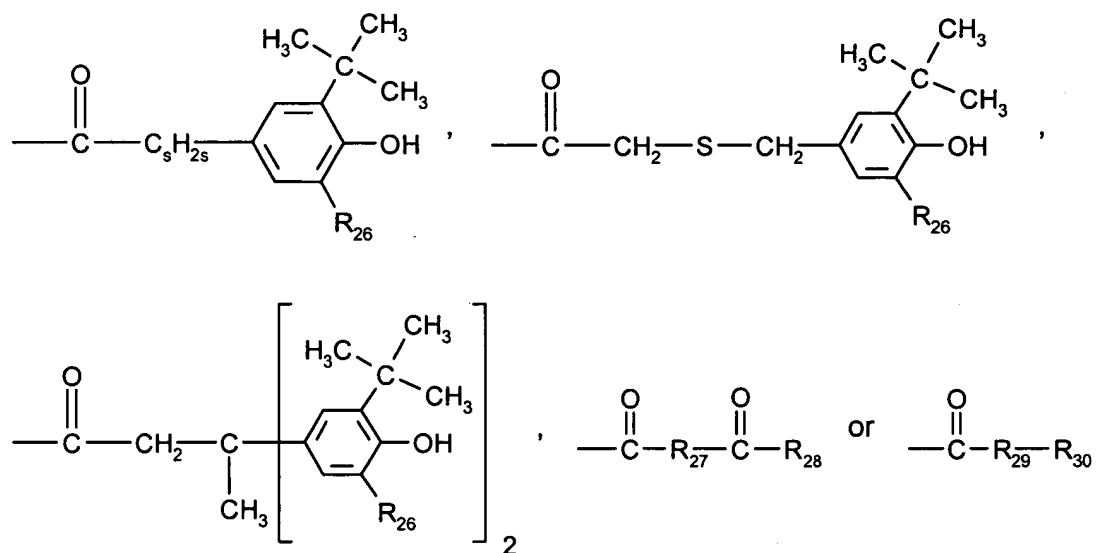
and R₂₁, together with the linking carbon atoms, form a C₅-C₁₂cycloalkylene ring which is unsubstituted or substituted by 1 to 3 C₁-C₄alkyl;

R₂₂ is hydrogen or C₁-C₄alkyl,

R₂₃ is hydrogen, C₁-C₂₅alkanoyl, C₃-C₂₅alkenoyl; C₃-C₂₅alkanoyl which is interrupted by oxygen, sulfur

or >N-R_{14} ; C₂-C₂₅alkanoyl which is substituted by a di(C₁-C₆alkyl)phosphonate group;

C₆-C₉cycloalkylcarbonyl, thenoyl, furoyl, benzoyl or C₁-C₁₂alkyl-substituted benzoyl;



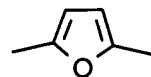
R₂₄ and R₂₅ are each independently of the other hydrogen or C₁-C₁₈alkyl,

R₂₆ is hydrogen or C₁-C₈alkyl,

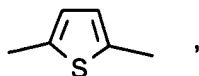
R₂₇ is a direct bond, C₁-C₁₈alkylene; C₂-C₁₈alkylene which is interrupted by oxygen, sulfur or

>N-R_{14} ; C₂-C₁₈alkenylene, C₂-C₂₀alkylidene, C₇-C₂₀phenylalkylidene, C₅-C₈cycloalkylene, C₇-

C₈bicycloalkylene, unsubstituted or C₁-C₄alkyl-substituted phenylene,



or



R₂₈ is hydroxy, $\left[-O^- \frac{1}{r} M^{r+} \right]$, C₁-C₁₈alkoxy or $-N \begin{matrix} R_{24} \\ R_{25} \end{matrix}$,

R₂₉ is oxygen, -NH- or $\begin{matrix} O \\ || \\ N-C-NH-R_{30} \end{matrix}$,

R₃₀ is C₁-C₁₈alkyl or phenyl,

R₃₁ is hydrogen or C₁-C₁₈alkyl,

M is an r-valent metal cation,

X is a direct bond, oxygen, sulfur or -NR₃₁- ,

n is 1 or 2,

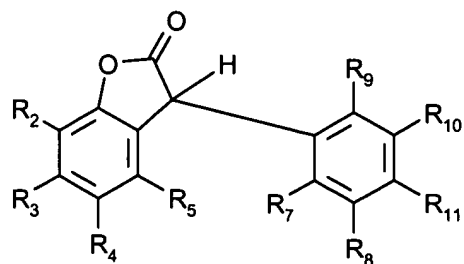
p is 0, 1 or 2,

q is 1, 2, 3, 4, 5 or 6,

r is 1, 2 or 3[.,.] and

s is 0, 1 or 2.

11. (currently amended) A process according to claim 10 wherein the benzofuran-2-one type compound is of formula XIV



(XIV)

wherein

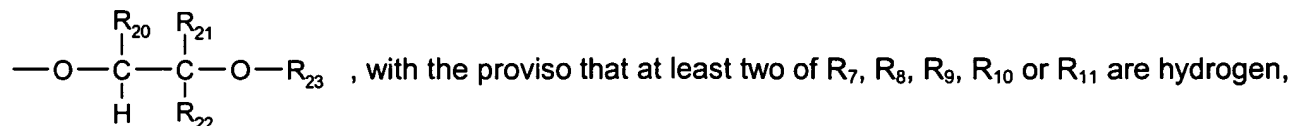
R₂ is hydrogen or C₁-C₆alkyl,

R₃ is hydrogen,

R₄ is hydrogen or C₁-C₆alkyl,

R₅ is hydrogen,

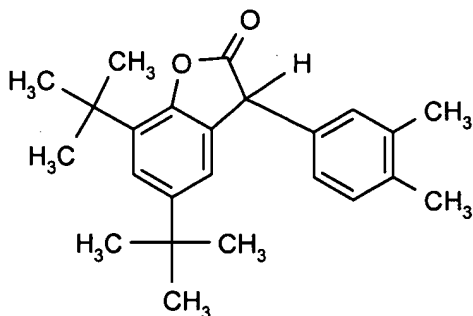
R₇, R₈, R₉, R₁₀ and R₁₁ are each independently of one another hydrogen, C₁-C₄alkyl, C₁-C₄-alkoxy or



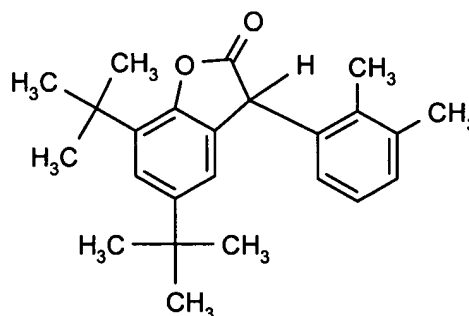
R₂₀, R₂₁ and R₂₃ are hydrogen[[,]] and

R₂₃ is C₂-C₄alkanoyl.

12. (original) A process according to claim 11 wherein the benzofuran-2-one type compound is of formula XIVa or XIVb



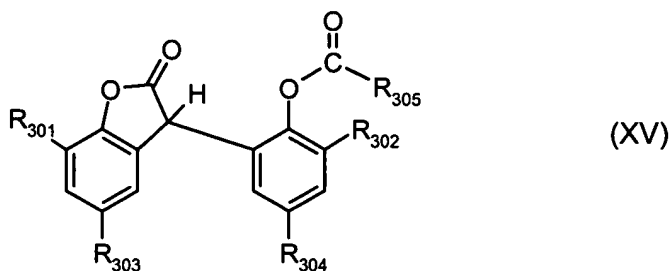
(XIVa)



(XIVb)

or a mixture or blend of the two compounds of formulae XIVa and XIVb.

13. (currently amended) A process according to claim 1 wherein the benzofuran-2-one type compound is of formula XV



wherein

R_{301} and R_{302} are each independently of one another hydrogen or C_1 - C_8 alkyl,

R_{303} and R_{304} are each independently of one another C_1 - C_{12} alkyl[$[\cdot]$] and

R_{305} is C_1 - C_7 alkyl.

14. (original) A process according to claim 1 wherein the bis-acyllactam is used in an amount of 0.01 to 5 % by weight based on the weight of the polycondensate.

15. (original) A process according to claim 1 wherein the phosphite, phosphinate or phosphonate is used in an amount of 0.01 to 5 % by weight based on the weight of the polycondensate.

16. (original) A process according to claim 1 wherein the benzofuran-2-one type compound is used in an amount of 0.01 to 5 % by weight based on the weight of the polycondensate.

17. (currently amended) A process according to claim 1 wherein the ratio of the bis-acyllactam to b1) the phosphite, phosphinate[$[\cdot]$] or phosphonate or to b2) the benzofuran-2-one type compound or to b3) the sum of all is from 1:10 to 5:1.

18. (original) A process according to claim 1 wherein the maximum mass-temperature of the melt is from 170° to 320° C.

19. (original) A process according to claim 1 wherein an oxazoline compound is additionally present.

20. (currently amended) A composition comprising

a) a polycondensate;

b) at least one bis-acyllactam~~[[;]]~~ and

c1) at least one phosphite, phosphinate or phosphonate; or

c2) at least one benzofuran-2-one type compound or

c3) at least one phosphite, phosphinate or phosphonate and one benzofuran-2-one type compound.

21. (currently amended) A polycondensate obtained~~able~~ by a process according to clam 1.

22. (canceled)